

APPENDIX D

Stuart Mill Bay Fishing Access Site Draft EA

SENSITIVE PLANTS IN THE GEORGETOWN LAKE AREA **Threatened, Endangered, Proposed Threatened or Endangered,** **and Forest Service Sensitive Plant Species**

It is Forest Service policy to protect the habitat of federally listed threatened, endangered, and proposed threatened species and to avoid or minimize impacts to species designated by the Forest Service as sensitive.

All Forest Service projects, programs, and activities are to be reviewed for possible effects on threatened, endangered, proposed threatened or endangered, and sensitive species.

This report focuses on threatened, endangered, proposed threatened or endangered, and sensitive plant species near Georgetown Lake, Montana.

Threatened, Endangered, and Proposed Threatened Species

A search of the Montana Natural Heritage Program (MNHP) element occurrence database (nhp.nris.state.mt.us/eoportal) indicates no known occurrences of federally listed threatened, endangered, or proposed threatened or endangered plant species in the Georgetown Lake area or on the entire Beaverhead-Deerlodge National Forest.

Forest Service Sensitive Species

Forest Service sensitive species are species for which the Regional Forester has determined there is a concern for population viability range-wide or in the region. The following Forest Service Region 1 sensitive plant species are known to occur in the Georgetown Lake area (MNHP and Pintler Ranger District records):

Botrychium crenulatum (Wavy moonwort) occurs in moist meadows near Georgetown Lake. This species prefers stream bottoms, around seeps, on edges of marshes, and in wet roadside swales, often on soils influenced by reprecipitated calcium. Vegetation dominated by spruce, alders, and dogwood, with high cover and diversity of forbs and graminoids. Expected elevation range is 2,440-7,680 feet.

Botrychium hesperium (Western moonwort) occurs on an old roadbed (closed and revegetating) in a grassland at Georgetown Lake. Western moonwort prefers dry to moist, often gravelly and lightly disturbed soil of grasslands, meadows, and mid-succession gravel bars in the valley and montane zones (3,200-8,200 feet).

Botrychium paradoxum (peculiar moonwort) occurs in *Festuca scabrella*/*Festuca Idahoensis* (rough fescue/Idaho fescue) grasslands and in moist meadows near Georgetown Lake. This species prefers a habitat of moist grassy meadows in upper montane and subalpine zones (3,550-8,480 feet).

Phlox kelseyi var. *missoulensis* (Missoula phlox) occurs on ridgelines in the Georgetown Lake area. Missoula phlox grows on dry, rocky, exposed slopes and foothills at elevations of 3,600-8,100 feet.

Allotropa virgata (candystick) in lodgepole forest northeast of Georgetown Lake. Candystick is a forest species preferring southeast to east aspects on gentle slopes and ridges in mature lodgepole pine forests. On the Beaverhead-Deerlodge National Forest, candystick has been found mostly in forests with *Xerophyllum tenax* (beargrass) and *Vaccinium scoparium* (grouse whortleberry) and often on nearly bare soils.

Thalictrum alpinum (alpine meadowrue) occurs in moist meadows near Georgetown Lake. Alpine meadowrue's preferred habitat is on hummocks in moist alkaline meadows at elevations of 4,855-8,280 feet.

Potential Sensitive Plant Habitat

The Region 1 sensitive species list dated 1999 was reviewed to determine which Forest Service sensitive species might have occupied habitat in the wet meadows and grasslands near Georgetown Lake. Results are listed in the tables below.

Wet Meadows and Streambanks

Species/ Global Ranking/ State Ranking/ Maturity Timeframe	Elevation	Habitat Notes
<i>Botrychium crenulatum</i> (Wavy moonwort) G3/S2 Mature Fronds Jun-Jul	2440-7680 feet	Stream bottoms, around seeps, on edges of marshes, in wet roadside swales. Vegetation dominated by spruce, alders, and dogwood, with high cover and diversity of forbs and graminoids. Known to occur on Pintler Ranger District in Granite County, and also in Flathead, Lake, Lincoln, Missoula, and Sanders Counties.
<i>Carex Idahoa</i> (Idaho sedge) G2Q/S2 Fruit Jul-Aug	4500-8420 feet	Wet meadows around seeps, ponds, or streams, usually associated with calcareous parent materials in the foothills to montane zones. Known to occur on Butte, Dillon, Jefferson, and Wisdom Ranger Districts and in Beaverhead, Gallatin, Madison, Powell, and Silver Bow Counties.
<i>Castilleja gracillima</i> (Slender Indian paintbrush) G3G4Q/S2 Flower Jun-Aug	5160-7000 feet	Wet meadows and streambanks. Known to occur in Gallatin, Madison, and Park Counties.
<i>Gentianopsis simplex</i> (Hiker's gentian) G4/S1 Flower Jun-Aug	4460-8400 feet	Fens, meadows, and seeps, usually in areas of crystalline parent material, in the montane and subalpine zones. Known to occur on Wisdom Ranger District and in Beaverhead, Carbon, and Missoula Counties.
<i>Juncus hallii</i> (Hall's rush) G4G5/S2 Flower Jul-Aug	4000-8860 feet	Moist to dry meadows and slopes, from valley to montane zones. Known to occur on Butte, Madison, and Wisdom Ranger Districts and in Beaverhead, Broadwater, Gallatin, Madison, Meagher, Powell, and Silver Bow Counties.
<i>Mimulus primuloides</i> (Primrose monkeyflower) G4/S2 Flower Jul-Sep	6750-8440 feet	Fens, sphagnum bogs, and wet meadows in the montane and subalpine zones. Known to occur on Dillon, Wisdom, and Wise River Ranger Districts and in Beaverhead and Ravalli Counties.
<i>Scirpus cespitosus</i> (Tufted club-rush) G5/S2 Fruit Jul-Aug	3200-9200 feet	Wet meadows and sphagnum bogs in the montane to alpine zones. Known to occur on Wise River Ranger District and in Beaverhead, Flathead, Lewis & Clark, Lincoln, Powell, and Teton Counties.
<i>Thalictrum alpine</i> (Alpine meadowrue) G5/S2 Flower May-Jun	4855-8280 feet	Moist, alkaline meadows in the valley to montane zones. Known to occur on Dillon, Madison, and Pintler Ranger Districts and in Beaverhead, Deer Lodge, and Granite Counties.
<i>Veratrum californicum</i> (California false-hellebore) G5/S1 Flower Jul-Aug	6160-7360 feet	Wet meadows and streambanks in the montane and subalpine zones. Known to occur on Pintler Ranger District and in Gallatin, Granite, Ravalli, and Lewis & Clark Counties.

Grasslands and Sagebrush

Species/		
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Global Ranking/ State Ranking/ Maturity Timeframe	Elevation	Habitat Notes
<i>Allium acuminatum</i> (Tapertip onion) G5/S1 Flower May-Jun	2600-8000 feet	Dry open forests and grasslands. Known to occur in Anaconda Pintler Wilderness and in Madison, Ravalli, and Sanders Counties.
<i>Arabis fecunda</i> (Sapphire rockcress) G2/S2 Flower Apr-Jun	4200-7960 feet	Open, rocky, often eroding slopes developed from calcareous plant material in foothills and montane zones. Known to occur on Butte, Jefferson, and Wise River Ranger Districts; in Butte and Dillon Field Offices; at Humbug Spires; in Beaverhead, Ravalli, and Silver Bow Counties.
<i>Astragalus scaphoides</i> (Bitterroot milkvetch) G3/S2 Flower May-Jun	5300-7160 feet	Silty, often stony soil in sagebrush grassland. Known to occur on Dillon Field Office and Dillon Ranger District in Beaverhead County.
<i>Botrychium hesperium</i> (Western moonwort) G3/S2 Mature fronds Jun-Jul	3200-8200 feet	Dry to moist, often gravelly, lightly disturbed soil of grasslands, meadows, gravel bars. Known to occur in Anaconda Range on Pintler Ranger District and also in Flathead, Glacier, and Lincoln Counties.
<i>Botrychium paradoxum</i> (Peculiar moonwort) G2/S2 Mature fronds Jun-Jul	3550-8480 feet	Mesic meadows associated with spruce and lodgepole pine forests in montane and subalpine zones. Known to occur on Pintler and Jefferson Ranger Districts; in Deer Lodge, Flathead, Glacier, Granite, Jefferson, Lincoln, and Teton Counties.
<i>Juncus hallii</i> (Hall's rush) G4G5/S2 Flower Jul-Aug	4000-8860 feet	Moist to dry meadows and slopes from valley to montane zones. Known to occur on Butte, Madison, & Wisdom Ranger Districts; in Beaverhead, Madison, Meagher, Powell, Silver Bow Counties.
<i>Penstemon lemhiensis</i> (Lemhi beardtongue) G3/S2 Flower Jun-Jul	4150-8200 feet	Open sagebrush and woodland slopes. Known to occur on Butte, Dillon, Jefferson, Wisdom, and Wise River Ranger Districts in Beaverhead, Deer Lodge, Silver Bow Counties; also in Ravalli County.
<i>Ranunculus jovis</i> (Jove's buttercup) G4/S2 Flower Apr-Jun	6700-9500 feet	Sagebrush grasslands to open forest slopes. Known to occur on Madison Ranger District; in Beaverhead, Madison, Gallatin Counties.
<i>Trifolium gymnocarpum</i> (Hollyleaf clover) G4/S2 Flower May-Jul	4800-6300 feet	Open woods and slopes, usually in dry soil of sagebrush steppe to ponderosa pine forest – found in western Granite County and in Ravalli County.

Heritage Program Ranks (from MNHP Plant Species of Concern, April 2003)

The international network of Natural Heritage Programs employs a standardized ranking system to denote **global** (range-wide) and **state** status (NatureServe 2002). Species are assigned numeric ranks ranging from 1 (high risk) to 5 (demonstrably secure), reflecting the relative degree of risk, based upon available information.

A number of factors are considered in assigning ranks—the number, size and distribution of known occurrences or populations, trends (if known), habitat sensitivity, and definable threats. Factors in a species' life history that make it especially vulnerable are also considered (e.g., dependence on a specific pollinator).

Montana Plant Species of Concern are those with a state ranking of S1 through S2 (including S2S3) or SH (known only from historical records). Species ranked S3 (including S3S4, SU, SR or other special rank designations are treated as Species of Potential Concern. Rank definitions are given below and reflect some updates in terminology in an attempt to avoid terms like “imperiled” that may be perceived as implying “endangered” or “threatened”. The meaning and criteria for ranks remain unchanged, to maintain consistency with international standards.

Rank	Definition
G1 S1	At high risk because of extremely limited and potentially declining population numbers and/or habitat, making it highly vulnerable to global extinction or extirpation in the state.
G2 S2	At risk because of very limited and potentially declining population numbers and/or habitat, making it vulnerable to global extinction or extirpation in the state.
G3 S3	Potentially at risk because of limited range, populations and/or habitat, even though it may be abundant in some areas.
G4 S4	Apparently secure, though it may be quite rare in parts of its range, and/or suspected to be declining.
G5 S5	Demonstrably secure, though it may be quite rare in parts of its range.
GU SU	Possibly at risk, but status uncertain; more information needed.
GH SH	Historical, known only from records over 50 years ago; may be rediscovered.
GX SX	Believed to be extinct globally or extirpated in the state; historical records only.
SR	Reported within the state but the documentation has not been confirmed/verified.
SA	Native in nearby states, but in Montana believed to be accidentally introduced, deliberately planted, or escaped from plantings.
HYB	Recurrent hybrids.

Combination Ranks

G#G# or S#S#

Indicates a range of uncertainty about the status of the species.

Sub-rank

T# Rank of a subspecies or variety; appended to the global rank of the full species, e.g. G4T3.

Qualifiers

Q Distinctiveness of the taxon is questionable; appended to the global rank, e.g. G3Q.

? Denotes uncertainty; inexactness.

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